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PRICE THREE HALFPENCE.

VISIT TO THE ALBERT AT WOOLWICH.

DURING a late short residence in London, I experienced much gratification from a visit which I was led to pay to the Albert steamer, one of the three vessels fitted up for the contemplated expedition to the

It is generally known that the efforts of the more civilised states of Europe to suppress the slave-trade, have not by any means accomplished their object. ugh a vigilant corps of cruisers is kept up on the African coast, and courts are supported at a great expense to adjudicate the seized vessels, it appears that the trade continues to be carried on with greater vigour than it was thirty years ago, and is now sup-posed to involve the misery of at least half a million of human beings per annum. It has latterly become the conviction of those who take a benevolent interest in the subject, that the present machinery is, from circumstances, not calculated to be successful; and that the only true means of putting down the evil is to introduce into Africa itself the commercial and moral habits of European nations, by which, it is con-ceived, the temptation to make a prey of each other would be taken from the people, at the same time that an inferior end might be served in the opening up of new markets for British skill and enterprise. To promote these purposes, a society was established about two years ago, consisting of all the more con-spicuous opponents of slavery in the empire; and, at their entreaty, the sum of L.60,000 was granted by parliament, to aid in fitting out and dispatching a preliminary expedition to the Niger. How far this money is to be considered as well bestowed, I do not se to inquire. I only feel that the design is dear to the philanthropic mind, and that it is impossible not to sympathise with the individuals who are perilling their lives in an enterprise in which the risk is fessedly so great.

The nature of the expedition being peculiar, it was found necessary to adopt peculiar means for carrying it out. The two great difficulties to be contended with are, the rocky channel of the Niger, and the malaria which prevails at the mouths of that river, and most so during the season when, from rains, the channels are most easily navigated. To overcome these difficulties, science was called in to make peculiar efforts. Three iron steamers were built at Liverpool, one of them (the Soudan) being designed for detached service, when required, up the smaller rivers, and for sounding ahead of the other two (the Wilberforce and Albert), which are of larger dimensions. The whole were fitted up and furnished in all respects as seemed most likely to secure the successful issue of the expedition, and this at an expense, I believe, considerably exceeding the amount of the parliamentary grant.

When it was proposed to me to inspect the Albert (April 15), I learned that the two other vessels had sailed some time before, and that this was expected also to leave her station in the Thames in the course of a few days, the preparations being now on the point of being completed. Seeing, therefore, that no time was to be lost, I agreed to take a letter of introduction next day to the surgeon of the vessel. Noon, accordingly, saw me on board the good ship, as she lay at her moorings opposite to the governor's house at Woolwich. Unfortunately, the surgeon was absent; but, by the kindness of the master, I saw every thing worthy of being seen, and am thus enabled to present a minute description of the vessel—a description, I may remark, which serves for the Wilberforce also, as these two vessels are precisely identical in measurement and in all other respects.

The Albert is a vessel of 440 tons, 136 feet in length of deck, and five feet nine inches of draught. furnished with two engines of 35 horse-power es and capable of carrying fuel sufficient for fifteen days of twelve hours. She is an iron vessel-that is, the hull is completely composed of plate iron; but it may not be superfluous for many readers to state, that the deck and other parts are, as usual, of wood. Let it not be supposed by those ignorant of nautical affairs, that any peculiar danger attends such a mode of struc-ture. There are in the Albert four partitions of iron, perfectly water-tight, thus forming the whole extent of the vessel into five distinct compartments, so that, should a breach be made any where in the part below the water, the in-rushing element would at the most fill only that compartment in which the damage took place, leaving the rest for the use of the individuals on oard. There is even a further precaution, in the form of what is called in America a snag-chamber, namely, an empty space at the head of the vessel, designed to receive any blow from a lurking piece timber projecting from the bottom of a river the most common form of damage, we believe, in river navigation. The compartment adjoining the snagchamber is the forecastle, the place appropriated in all vessels for the common sailors; next is the mid-shipmen's section; next, the place for the machinery and coal; next, the cabins of the inferior officers; ar last of all, nearest the stern, the captain's cabin. Of all these compartments, that for the machinery is considerably the largest, occupying nearly a third part of the extent of the ship.

I found all the apartments of the vessel roomy and agreeable. For example, the section for the officers contains a central apartment, of the size of an ordinary parlour, being designed as a common room, while around are four bed-rooms, devoted respectively to the master, surgeon, &c., the latter being not much smaller than many bed-rooms in ordinary houses. forecastle is a spacious and neatly furnished room. It contains a small library of instructive and entertaining books for the use of the men; and, with its piles of crockery, its neat presses, and other such accommodations, it looks much like a good kitchen. The vessel is furnished with an ample store of proons, including preserved fresh meat sufficient for four months' consumption. It has an unusual store of medicines, not only that no lack may be experienced as far as the ship's company is concerned, but that the medical officers may, by the practice of their art amongst the natives, promote that respect for the civilised man which obviously will tend to advance the objects of the expedition. I was shown a few the objects of the expedition. I was shown a few shelves full of Arabic bibles, for distribution amongst the natives. It must be understood that the expedition partakes of the missionary character. There is a minister of religion on board every vessel; and prayers are read to the crew three times a-day. At the sa time, the spirit of the higher sentiments is not solely trusted to for the safety of the expedition. In the Albert, I found four mounted brass twelve-pounders upon the quarter-deck, besides a few of those colossal firelocks which can be planted on a wall or gunwale nd fired in various directions. Each officer has his double-barrelled piece for his protection in excursions, as well as for the purpose of bringing down zoological specimens. I saw a goodly range of muskets for the men, and a rack containing some dozens of light cut-lasses. I was also informed that the stock of powder in each vessel was not much less than three tons.
On such an adventure, I apprehend, it would be found quite impossible to obtain the services of scamen without supplying them with the means of a vigorous

self-defence; but I trust it has been carefully im pressed on all of how much importance it is to avoid quarrelling with the natives, and that, as far as possible, mild measures alone should be adopted. It may here be added, that the company on board amounts to about a hundred men.

I now come to advert to what is certainly the me remarkable part of the furnishings of the Albert. The malaria, it must be observed, consists of a stratum of noxious gases, which rests on the surface of the river, much after the manner of that in the celebrated Grotto del Cane at Naples; but, while the latter is only deep enough to involve dogs and such small nals, the stratum on the Niger is many feet thick, and therefore affects every person on board every vessel which enters it. When the three new vessels were laid down,\* it was contemplated that all possible medical preparation would be made to meet this danger; but there was no thought of any novel expedient being adopted for the purpose. Before, how-ever, the construction of the vessels had gone very far, Dr D. B. Reid, well known for his successful ventilation of the House of Commons, suggested an arrangement by which the persons on board might, as he conceived, have supplies of healthy air even while in the midst of the malaria. The plans of this scientific person have consequently been adopted; and the result is a most curious and interesting exa the bearing of science on human comfort and happi-ness. I shall describe the apparatus as exactly as an inspection of it, and the perusal of Dr Reid' descriptions, have enabled me to comprehend it. In the first place, a wide canvass tube, nearly a hundred feet in length, is raised into the air in connexion with the principal mast, and is so arranged that its mouth opens towards the wind. Thus air is sent down from a point about a hundred feet above the surface of the river, where it may well be supposed to be much purer than it is in the lower parts of the stratum, if not altogether as pure as air any where could be found. The tube ends in a large air-tight iron case or chamber, which stands on deck, and which is fitted up in the interior with shelves and sieves, containing chemical preparations for purifying and medicating the air. From this iron room, called the medicator, another tube descends below deck into the engine-roo it enters a case in which there is a pair of fanners. The fanners are wrought by a crank from the steamengine, and draw air down through the tall canvass tube and through the medicator, and propel it through smaller channels issuing into overy apartment in the vessel, so as to fill these rooms with constant supplies of pure and salutary air. This is the outline of the plan, but, for clearness, I have omitted to state that there is a case with fanners at each side of the engine-room, and that each of these has a tube descending from nedicator. It is also to be added, that the channels for the admission of fresh air open through plates of zinc perforated with minute holes, so that there can be no danger from its coming in too great a stream.

And not only can the air be thus made for certain pure, but it may also be supplied at any desired de-gree of temperature. There is a suspicion that the

<sup>\*</sup> The steamers were built by Mr John Laird of Liverpool, and I find, by a business card which has come into my hands, that he has already constructed forty such vessels, from 50 to 169 feet in length, and which are now plying in various parts of the world, including India, China, Egypt, and South America. Of the general opinion of maritime men with respect to the character of from vessels, I am unable to give any account; but, assuredly, the division into compartments is a device worthy of general adoption in all kinds of vessels, though it might have a loss chance of civilating danger in those composed of wood than in those composed of metal.

evil effects of malaria partly depend on the pres of animalcules with which the bad air is charged. meet this peculiarity, supposing it to exist, Dr Reid has added an apparatus of steam-tubes, enclosed in a case, through which he brings the air before it enters ator, and which, heating the air to 212° of Fahrenheit, ensures the destruction of every particle of animal life which may be passing that way, the air being afterwards cooled down in the medicator as far as may be desired.

The process here described, consisting, it will be observed, of throwing in pure air, is called ventilation upon the plenum principle. It may not, however, be sary or expedient to take such means for procur ing fresh air in the apartments of the vessel. A mere drawing out of the used air of the cabins may be all that is necessary. With a view to doing this alone, Dr Reid has so arranged the apparatus, that, by merely closing one valve and opening one or two others, and causing the fanners to ply in the opposite direction, a draught is established outwards, clearing the rooms of every particle of superfluous carbonic acid gas which may have been formed by the lungs of the inmates, and causing a rushing in by other crannies and channels of a pure air to supply the place of that taken out. This is called ventilating upon the cacum principle, or by exhaustion. It treduced into all large and crowded vessels, and there ean be but one opinion as to the expediency of doing When we consider how small is the space usually allotted for sleeping places in vessels, we cannot doubt that in them such a means of obtaining a supply of fresh air is more needed than in almost any other e. I have not the least doubt that the h the navy would be immensely improved by the general introduction of a fanner ventilation on the vacuum a; and I would fain hope that the exemplification the principle on board the Niger vessels will lead to this being done.

The expedition comprehends several naturalists, whose business it will be to collect specimens of the stany and zoology of the countries visited; and it is contemplated, as a duty of the medical officers, to make observations concerning the nature d causes of malaria, with a view to the suggestion of proper means for preventing its action in ordinary circumstances. It is conceived that, by a careful examination of the substances employed for the purion of the air, after they have been used, some light will be thrown on the character of that noxious matter which makes malaria so formidable. Already there have been many curious speculations on this subject amongst the scientific men connected with the expedition, and it will now be for them to bring their ideas to the test of actual experiment. Should this expedition, from any cause, experience less than the success which all philanthropic persons must de-sire for it, it will at least have done some good if it adds to our knowledge on one of the obscurest, and, at the same time, most important points in medical

After an examination as minute as the convenience of the officers would permit, I left the Albert with a mind deeply impressed. The scheme may be wild nary, as the schemes of the benevolent often are, and the money expended on it might have been are, and the money expended on it might have been no doubt devoted to a thousand purposes of more direct and certain utility. Yet it was interesting to reflect on that mixture of philanthropy with the spirit of enterprise and of commerce, which dictated e expedition; and that, after all the sad mishaps which have befallen those who have exposed them-selves for the sake of Africa, there could still be found a few hundred men willing to expose themselves again in the same cause. Though not given to glori-fying my country on all possible occasions, I could not but reflect with some degree of pride, that even for the wees of a barbarous people, in a remote and al-most unknown continent, the heart of England could afford to throb, after providing for many sorrows nearly affecting herself. There is also much to gratify in the consideration of the many appliances which the cultivated intellect of the European has here brought to bear on a case involving immense practical difficulties. A ship of metal, yet most buoyant-a cunning device to neutralise one whole class of accints-motive force obtained from boiling watermedical and alimentary arrangements of the most apt and efficient kind—and, finally, a plan tried for the first time for creating pure air in the midst of the

valley of the shadow of death ! What an aggregation of admirable expedients, all of them the offspring of high civilisation, and all put into action mainly for the benefit of people who do not as yet dream of the existence of such things! How strikingly have we thus brought before us the difference between th ignorant and the enlightened man; and how noble does science appear when it thus extends its hand to further a cause in which, to all appearance, there might otherwise be a succession of martyrdoms to all eternity, without the least good being done!

## A STORY OF AUSTRIA.

"My dear father, you cannot, you surely will not, sacrifice me to this man, whom I can never love—who is not worthy of my love! Oh! ere it be too late, let my entreaties move you from this unhappy pur-

pose."

This was the anxious prayer of a daughter to her father, on the morning which was destined to see her finally contracted to a man whom she disliked and despised. But she spoke to obstinate ears. General finally contracted to a man whom she disliked and despised. But she spoke to obstinate ears. General Veithein had been accustomed for many long years to receive unlimited obedience from those placed under him in the Austrian military service, and, though not a harsh parent, could not bear to have his wishes thwarted even by an only daughter. "Do not provoke me, Aurelia," said he; "ought I not to be the best judge of what is for your real interest and happiness? And can I have any other objects at heart in this match? Besides, I will not take your opinion of Baron Mantheim as the correct one. He was a soldier; and, though eircumstances permitted him to see little actual service, I am sure he is brave, and merits none of the foolish reflections which you are prejudiced enough to throw out against him. He is wealthy, too, and can place you in a station befitting your birth and family. Finally, Aurelia, my word has been passed to him, and so there need be no more said on the subject."

and ramity. Finally, Aurelia, my word has been passed to him, and so there need be no more said on the subject."

The young lady was silent for a moment, and the general rose to leave the room. "Oh, dear father!" said Aurelia anxiously, as she started to his side, and laid her hand on his shoulder; "if I can expose this man's real character to you—if I can prove to you his utter want of spirit, his absolute poltroonery, will you not spare me this detestable union!" "Ay, girl, if—if indeed, you could do this," returned the general, "matters would certainly be somewhat changed. A coward were no fit husband for a daughter of mine. But you speak of things absured—impossible; so, no more of this. Prepare yourself; Mantheim will soon be here. And fear not, my love," continued the veteran more affectionately, "but you will be happy. I have no wish but to see you so; and I act as I do because I believe that that object can only be brought about by crossing your own foolish desires at this moment." Kissing her brow with parental fondness, the general then left his daughter's apartment.

For a short time afterwards, Aurelia sat absorbed in thought, her fair countenance indicating many anxious emotions. At length she rose from her seat, with the air of one who had formed some decisive resolution, and rang for her waiting-maid. The latter came at the summons. As she entered the room, Aurelia started somewhat hastily and discomposedly, and turned the key of a little closet-door in her apartment. She then assumed a calm manner, seemingly regretting the hurried action into which she had been led. "Get me the necklace which I were yesterday, Bertha," said she to the girl. "It is in your dressing-closet, madam," answered Bertha, and she advanced

ment. She then assumed a calm manner, seemingly regretting the hurried action into which she had been led. "Get me the necklace which I wore yesterday, Bertha," said she to the girl. "It is in your dressing-closet, madam," answered Bertha, and she advanced with great alacrity to the door of the closet, which her mistress had aroused her curiosity by locking so hastily. But Aurelia interposed herself between the girl and the closet, with sufficient quickness to prevent the other from entering. "You need not trouble yourself to seek it, Bertha," cried she; "I will get it myself. Go you down stairs, and learn when Baron Mantheim arrives. Inform him that I wish to speak with him immediately, and bring him hither. Go, and remember this." Bertha could not avoid obeying the command thus given to her, but she could as little refrain from betraying by her glances that the conduct of her young mistress had awakened in her both curiosity and suspicion. To say the truth, the girl and her lady were not upon those terms on which young heroines and their personal attendants are usually found, at least in stories and romances. Bertha had been induced, by pretty liberal donceurs, to take the side of the father, and of the lover favoured by him, in the matrimonial matters under agitation in the old general's family, and, as a natural consequence, had lost the confidence of the opposite party, her own mistress.

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fost the confidence of the opposite party, her own mistress.

When left by Bertha, Aurelia did not remain long alone, for the waiting-maid seen returned, bringing with her the suitor countenanced by the general. As regarded mere looks, the Baron Mantheim could not have been much complained of, or objected to, by Aurelia. He was young, and at least tolerably well-favoured. In attire and appearance, moreover, he was very bold and martial, his moustache being of even more than national prominence. After he had santed himself, and requested to know what peculiar commands the lady had at that moment to honour him with, Aurelia addressed him somewhat abruptly.

"You are aware, sir, that your addresses have been always distasteful to me, and that I have endured them only in obedience to my father's commands. They are now more displeasing to me than ever." The suitor seemed but little discomposed by this salutation, which, indeed, communicated nothing new to him. "Let me hope, madam," said he in reply, "that time, and my anxious attentions, will remove this unfavourable feeling." "Time can do much, sir," returned the lady, "but time can make no alteration in my sentiments towards you. I assure you of this, and hope that the assurance will make you forbear, even yet, from pressing your suit on one who

or this, and hope that the assurance will make you forbear, ever yet, from pressing your suit on one who can neither be happy with you nor make you happy." Pardom me, lady," regiled the gentleman, assuming the appearance of great devotion, "it does rest with you, and you alone, to make me happy; and you will excuse me if I cannot consent to forego the properts which your father's kindness and his promise hold out to me."

Aurelia looked down, and, after a pause, answered, with a slight apparent degree of confusion, "Then, sir, I must beg to inform you—since you show so little generosity or forbeavance—that there may be others who consider themselves entitled to a voice in this matter." "Others!" Cried the lover, startled into a perceptible loss of colour; "what others can there be entitled to interfere in the matter! Come, madam, you jest." "I do not jest," answered Aurelia, with a tone of gravity which made an obvious impression on the baron, in spite of his attempts to assume a look of ease; "I do not jest, is." There are other parties—there is one other party, at all events—who may feel called upon to question the propriety of your perseverance in this suit against my fixed inclination." "Madam, what token party, at all events—who may feel called upon to question the propriety of your perseverance in this suit against my fixed inclination." "Madam, what token party, at all events—who may feel called upon to question the propriety of your perseverance in this suit against my fixed inclination." "Madam, what there is no such person," continued the doughty suitor, resuming in part his confidence; "there is no such person," continued the doughty suitor, resuming in part his confidence; "there is no such person," who but firmly; "there is such a person, and, at this moment, he is not far distant will your father asy to the fact, and and a person, and, at this moment, he is not far distant, or use of the party and the person to whom I allude is not far distant," repeated the young lady, "and the better of his for

myself in this closet to-day, banish me from your hand love for ever !"

myself in this closet to-day, banish me from your house and love for ever !"

Aurelia then led the way into the closet. Neither there, nor about the apartments, did the general see any one. "He has escaped!" cried the baron. "No! he has not escaped," said Aurelia, disdainfully. "Father, ask Baron Mantheim the name of this concealed accomplice—this holder of pistols to men's heads!"

"His name was Albert—Albert Imhoff," answered the baron without questioning. "Albert Imhoff!" exclaimed the general; "impossible! he died some months since on the field of battle; he was once my side-de-camp." "Yes, father, it was impossible that he should be here," said Aurelia, "but his name was enough. The very name of a brave man was enough to extort from Baron Mantheim's fears a resignation of my hand!" "But Bertha, daughter"— "Pardon me, dear father," continued Aurelia, "if I used artifice to gain my purpose, and to show you how unworthy of the hand of a brave man's child was he on whom you were about to bestow it. No one was ever in my chamber. This resignation was extorted not by pistols, but by the mere whisper of a name." "Why, baron"— said the amazed general, turning round. But the baron had slipped quietly away, nor did he ever re-appear to claim the annulment of the "resignation."

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and he ever re-appear to claim the annulment of the "resignation."

General Velthein was taught, by the preceding circumstances, that it would be much safer to allow Aurelia to choose her own partner for life. She soon found one who never gave her father cause to repent of his having indulged her with her own choice in the matter.\*

## LIEBIG'S ORGANIC CHEMISTRY.

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Some years ago, at a meeting of the chemical section of the British Association for the Advancement of Science, the task of preparing a report on organic chemistry was assigned to Dr Justus Liebig, professor of chemistry in the University of Giessen.† The manuscript subsequently prepared by Dr Liebig was committed to the hands of Mr Lyon Playfair, and by him carefully edited, and published in the course of last year, under the title of "Organic Chemistry in its Application to Agriculture and Physiology."? Had the British Association not otherwise assisted in extending the boundaries of science than in eliciting this valuable contribution to human knowledge, it would have deserved the thanks of the community. The work of Dr Liebig, founded perhaps on more careful analyses than that of Davy, is decidedly the most original of its class; and, from the wide array of scientific principles brought to bear on the subject, it ought to attract the patient study not only of every agriculturist, but of every investigator into the original source of national wealth. In the hope of making it better known than it yet happens to be, and fixing attention to the subject, we shall endeavour to give an outline of the contents and train of reasoning.

tional wealth. In the hope of making it better known than it yet happens to be, and fixing attention to the subject, we shall endeavour to give an outline of the contents and train of reasoning.

At the outset, it may be proper to remember that, with the exception of that comparatively small portion drawn from the sea, the food of man is altogether a product of the ground—every thing is drawn from mother earth. The ground, however, is only the rough and immediate material in which vegetation is appropriately conducted, and the real bases of fertility are elementary principles in nature, which are in the first place assimilated to vegetable structure, and then to the food and component parts of animals. These elementary principles reside in two great fields, the soil and the atmosphere, but chiefly the latter. The air around us is an exhaustless reservoir of invisible material, from which all kinds of plants draw the principal part of their nourishment: from being invisible to the eye, vegetable growth causes the material, modified by the transformation, to be obvious to the senses. In the performance of this great and wonderful process in the economy of nature, various accessories, it may be supposed, are required—pure air, moisture, the alternate light of day and darkness of night, revolutions of the globe, winds—all act a part in the scheme, which, the more minutely it is investigated, appears to us the more sublime and beautiful. If the process of vegetable growth, in all the circumstances which we can imagine, were incapable of being assisted by artificial means, it would serve the purpose only of a rational curiosity to inquire into its character; but mankind have discovered, by dint of sheer experience and necessity, that the vegetable product is susceptible of prodigious increase by culture and the administration of restoratives to the soil. Here an entirely new view of the subject opens. We can increase our means of support by adding nature in her operations, and the great question at once arises—in wha

Translated from a French fouilleton.
 Giessen is capital of the German principality of Upper Meselonging to Messe-Darmstadt.
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After describing the constituent properties in most vegetable bodies, namely, carbon, the elements of water, and nitrogen, with certain metallic bases, he proceeds to inquire into the sources of these substances, particularly that of carbon, which is the main ingredient in plants. Here his views are somewhat peculiar. It has usually been supposed that the carbon of plants depends on the presence in the soil of a substance called homes, a product of the decay of other plants. Against this doctrine Liebig contends, and shows that the sources of carbon must have existed at first independently of decayed matter, for, otherwise, how could the first vegetables have existed! "The carbon of plants (he proceeds) must be derived exclusively from the atmosphere. Now, carbon exists in the atmosphere only in the form of carbonic acid; that is to say, in a state of combination with oxygen. It has been already mentioned, likewise, that carbon and the elements of water form the principal constituents of vegetables, the quantity of the substances which do not possess this composition being in very small proportion. Now, the relative quantity of oxygen in the whole mass is less than in carbonic acid. It is therefore certain, that plants must possess the power of decomposing carbonic acid, since they appropriate its carbon for their own use. The formation of their principal component substances must necessarily be attended with the separation of the carbonic acid from the oxygen, which must be returned to the atmosphere, whilst the carbon enters into combination with water or its elements. The atmosphere must thus receive a volume of oxygen for every volume of carbonic acid which has been demontative that a substance and the composed.

every volume of carbonic acid which has been decomposed.

This remarkable property of plants has been demonstrated in the most certain manner, and it is in the power of every person to convince himself of its existence. The leaves and other green parts of a plant absorb carbonic acid, and emit an equal volume of oxygen. They possess this property quite independently of the plant; for if, after being separated from the stem, they are placed in water containing carbonic acid, and exposed in that condition to the sun's light, the carbonic acid is, after a time, found to have disappeared entirely from the water. If the experiment is conducted under a glass receiver filled with water, the oxygen emitted from the plant may be collected and examined. When no more oxygen gas is evolved, it is a sign that all the dissolved carbonic acid is decomposed; but the operation recommences if a new portion of it is added.

The life of plants is closely connected with that of

portion of it is added.

The life of plants is closely connected with that of animals, in a most simple manner, and for a wise and sublime purpose. The presence of a rich and luxuriant vegetation may be conceived without the concurrence of animal life, but the existence of animal is undoubtedly dependent upon the life and development of plants.

is undoubtedly dependent upon the life and development of plants.

Plants not only afford the means of nutrition for the growth and continuance of animal organisation, but they likewise furnish that which is essential for the support of the important vital process of respiration; for besides separating all noxious matters from the atmosphere, they are an inexhaustible source of pure oxygen, which supplies the loss which the air is constantly sustaining. Animals, on the other hand, expire carbon, which plants inspire; and thus the composition of the medium in which both exist, namely, the atmosphere, is maintained constantly unchanged.

nged.

ay be asked, is the quantity of carbon It may be asked, is the quantity of carbonic acid in the atmosphere, which scarcely amounts to 1-10th per cent., sufficient for the wants of the whole vegetation on the surface of the carth—is it possible that the carbon of plants has its origin from the air alone? This question is very easily answered. It is known that a column of air, of 2216-66 lbs. weight, Hessian measure, rests upon every square Hessian foot of the surface of the carth; the diameter of the earth and its superficies are likewise known, so that the weight of the atmosphere can be calculated with the greatest exactness. The thousandth part of this is carbonic acid, which contains upwards of twenty-seven per cent. carbon. By this calculation it can be shown that the atmosphere contains 3000 billions Hessian lbs.\* of carbon—a quantity which amounts to more than the weight of all the plants, and of all the strata of mineral and brown coal, which exist upon the earth. This carbon is, therefore, more than adequate to all the purposes for which it is required. The quantity of carbon contained in sea water, is proportionally still greater.

But it is inconceivable that the functions of the

quantity of carbon contained in sea water, is proportionally still greater.

But it is inconceivable that the functions of the organs of a plant can cease for any one moment during its life: the roots and other parts of it, which possess the same power, absorb constantly water and carbonic acid. This power is independent of solar light. During the day, when the plants are in the shade, and during the night, carbonic acid is accumulated in all parts of their structure; and the assimilation of the carbon and the exhalation of exygen commence from the instant that the rays of the san strike them. As soon as a young plant breaks through the surface of the ground, it begins te acquire colour from the top downwards, and the true formation of weody tissue commences at the same time."

ing an interchange of atmospheres in different parts of the earth, will be new to many readers. "The proper, constant, and inexhaustible sources of oxygen gas are the tropics and warm climates, where a sky, seldom clouded, permits the glowing rays of the sun to shine upon an immeasurably luxuriant vegetation. The temperate and cold zones, where artificial warmth must replace deficient heat of the sun, produce, on the contrary, carbonic acid in superabundance, which is expended in the nutrition of the tropical plants. The same stream of air which moves by the revolution of the earth from the equator to the poles, brings to us, in it passage from the equator, the oxygen generated there, and carries away the carbonic acid formed during our winter. The experiments of De Saussure have proved that the upper strata of the air contain more carbonic acid than the lower, which are in contact with plants; and that the quantity is greater by night than by day, when it undergoes decomposition. Plants thus improve the air, by the removal of carbonic acid, and by the renewal of oxygen, which is immediately applied to the use of man and animals. The horizontal currents of the atmosphere bring with them as much as they carry away; and the interchange of air between the upper and lower strata, which their difference of temperature causes, is extremely trifling when compared with the horizontal movements of the winds. Vegetable culture heightens the healthy state of a country, and a previously healthy country would be rendered quituninhabitable by the cessation of all cultivation."

How grand the theory in these passages respecting the influence of winds on vegetation! Those streams of air which superstition would ascribe to demons, are among the most beneficent means arranged to preserve atmospheric salubrity, and afford materials for man's subsistence.

Humus, he proceeds to show, is only another form of carbonic acid, drawn originally from the atmo-

among the most believe to the many atmospheric salubrity, and afford materials for man's subsistence.

Humus, he proceeds to show, is only another form of carbonic acid, drawn originally from the atmosphere. "Transformations of existing compounds are constantly taking place during the whole life of a plant, in consequence of which, and as the results of these transformations, there are produced gaseous matters which are excreted by the leaves and blossoms, solid excrements deposited in the bark, and fluid soluble substances which are eliminated by the roots. Such secretions are most abundant immediations.

these transformations, there are produced gaseous matters which are excreted by the leaves and blossoms, solid excrements deposited in the bark, and fluid soluble substances which are eliminated by the roots. Such secretions are most abundant immediately before the formation and during the continuance of the fruit. Substances containing a large proportion of carbon, are excreted by the roots, and absorbed by the soil. Through the expulsion of these matters unfitted for nutrition, therefore, the soil receives again the greatest part of the carbon, which it had at first yielded to the young plants as food, in the form of carbonic acid. The soluble matter, thus acquired by the soil, is still capable of decay and putrefaction, and by undergoing these processes furnishes renewed sources of nutrition to another generation of plants; it becomes humss. The leaves of trees, which fall in the forest in autumn, and the old roots of grass in the meadow, are likewise converted into humus by the same influence: a soil receives more carbon in this form than its decaying humus had lost as carbonic acid." He seems to wish it to be understood, that humus is not taken up in an unaltered state into plants, but is a deposit of transformed carbonic acid in the soil, where it lies ready for re-transformation by the roots of plants.

Passing over a variety of details respecting the source and assimilation of nitrogen in plants, and other branches of his subject, we arrive at what may be called the practical part of the book—the nature and power of manures. The fertilising properties of manures depend on the presence of ammonia, under whatever form it may be disguised. Vegetables derive their nitrogen from ammonia, and an individual properties of manures depend on the presence of ammonia, under whatever form it may be disguised. Vegetables derive their nitrogen from ammonia, and no other form than that of ammoniscal salts." We wish we could spare room to enter into the author's details on this highly important as the properties of farm

<sup>\*[</sup>A Hessian pound is about a tenth greater than un English

fumes of the salt newly formed hang over the basin. In stables the same may be seen. The ammonia that scapes in this manner, is not only entirely lost as far as our vegetation is concerned, but it works also a slow, though not less certain, destruction of the walls of the building. For when in contact with the lime of the mortar, it is converted into nitric acid, which gradually dissolves the lime. The ammonia emitted from stables, &c. is always in combination with carbonic acid. Carbonate of ammonia and sulphate of lime (gypaum) cannot be brought together at common temperatures, without mutual decomposition. The ammonia enters into combination with the sulphuric acid, and the carbonic acid with the lime, forming compounds which are not volatile, and, consequently, destitute of all smell. Now, if we strew the floors of our stables, from time to time, with common grpsum, they will less all their offensive smell, and none of the ammonia which forms can be lost, but will be retained in a condition serviceable as manure."

Home manure, from the quantity of phosphate of lime which it contains, is known to be a highly efficacious restorative; but the manner in which it may be most advantageously applied, is perhaps not so well understood. "The manure of an acre of land, with forty lbs. of bone dust, is sufficient to supply three crops of wheat, clover, potatoes, turnips, &c., with phosphates. But the form in which they are restored to a soil does not appear to be a matter of indifference; for the more finely the bones are reduced to powder, and themore nitimately they are mixed with three or four parts of water; and after they have been digested for some time, to add one hundred parts of water, and sprinkle this mixture over the field before the plough. In a few seconds, the free acids unite with the bases contained in the earth, and a neutral salt is formed in a very fine state of division. Experiments instituted on a soil formed from grawacke, for the purpose of ascertaining the action of manure thus prepared, have

of six months."

The chemist Jugenhouss, as we are informed by Liebig, proposed a new manure in the form of diluted sulphuric acid, which forms gypsum (sulphate of lime) when sprinkled on calcareous soils, thus preventing the necessity of manuring with this material. From various passages in the work, it would appear that Liebig considers the chemistry of agriculture still in its feeblest infancy. He declares that it is of no consequence what is the external character of a manure; the descents of the material are alone to be regarded. "A time will come," says he, "when fields will be manured with a solution of glass (silicate of potash), with the sahes of burnt straw, and with salts of phosphoric acid, prepared in chemical manufactories, exactly as at present medicines are given for fever and gottre."

actly as at present medicines are given for fever and goitre."

We are particularly struck with the author's computation of the value of those liquids which mankind daily, and everywhere but in China, utterly neglect and throw away. This liquid contains thirteen times more nitrogen than horse manure, and six times that of a cow. The quantity produced by a single grown person annually would yield nitrogen for 800 lbs. of wheat, rye, oats, or of 900 lbs. of barley. For a weight of 1 lb. of this liquid, 1 lb. of wheat could be produced. If these data be correct, the United Kingdom loses many millions of pounds sterling annually, the whole of which could be easily saved. The Chinese do not allow a particle of the materials we allude to to be lost; and their agriculture excels ours to an incalculable degree. The people of this country, by an excess of fastidiousness, have hitherto scarcely paid any attention to this subject; and so little is practically known by us of the method of treating excrementitious matter for manure, that at this moment some of our agriculturists are actually importing from the continent a species of inoderous but fertilizing powder, manufactured from what in this country is almost universally lost. We regret that want of space here compels us to bring these facts and hints to a close, and we shall rejoice if they be serviceable

in stimulating landed gentry, farmers, and agricul-

## AN UNKNOWN SCOTTISH POET.

AN UNKNOWN SCOTTISH POET.

In the boundless list of poets and versifiers, who, though unknown to general fame, have helped to charm the little circle in which they moved, we must include the late Rev. James Nicol, minister of the parish of Traquair, a pleasing rural district in the vale of Tweed. We know scarcely any thing of the life of this unknown poet, further than that, by dint of great personal industry and perseverance, he emancipated himself, while young, from the toils of a laborious and humble profession, and with a mind cultured by a hard-won education, was fortunate in being installed as pastor of a parochial charge.

Casting our recollections back an interval of thirty years, we remember Mr Nicol as a man of peculiarly lively fancy, and to whom it was a pleasure to listen, his sermons being in a high degree attractive, from the singular force and originality of his language, as well as an extraordinary brilliancy of sentiment and metaphor. Besides possessing happy conversational powers, he was, like Burns, a poet of nature's own creating. Placed, when comparatively a young man, in a pleasant part of the country, and nigh the inspiring shade of the "Bush aboon Traquair," he had, in the intervals of professional occupation, a favourable opportunity for cultivating his poetical fancies. Among the earliest of the products of his muse, which tradition and fugitive literature have preserved, is the following song, which was addressed to the lady who afterwards became his wife. The lines, which are at once simple and beautiful, are sung slowly to a tune which we believe has never been published, though worthy of being so.

"Where Quair rins sweet amang the flowers, Down by you woody glen, lassie,"

" Where Quair rins sweet amang the flowers, Down by yon woody glen, lassie, My cottage stands—it shall be yours, Gin ye will be my ain, lassie.

I'll watch ye wi' a lover's care, And wi' a lover's ee, lassie; I'll weary Heaven wi' mony a prayer, And ilka prayer for thee, lassie.

"Tis true I hae na mickle gear; My stock it's unco sma', lassie; Nae fine-spun foreign claes I wear, Nor servants tend my ca', lassie.

But had I heir'd the British crown, And thou o' low degree, lassie, A rustic lad I wad hae grown, Or shared that crown wi' thee, las

Whenever absent frae thy sight,
Nae pleasure smiles on me, lassie;
I climb the mountain's towering height,
And cast a look to thee, lassie.

I blame the blast blaws on thy check The flower that decks thy hair, lass The gales that steal thy breath sae sw My love and envy share, lassie.

If for a heart that glows for thee, Thou wilt thy heart resign, lassie, Then come, my Nancy, come to me-That glowing heart is mine, lassie.

Where Quair rins sweet amang the flowers, Down by yan woody glen, lassie, My cottage stands—it shall be yours, Gin ye will be my ain, lassie."

Gin ye will be my ain, lassie."

If some sweet-voiced Nancy, such a one as these verses might have been addressed to, will take them up, and give them the benefit of her powers of melody, we doubt not but that all who have the good fortune to be present will declare them to be tender and impassioned, and well worthy of the pains bestowed in giving them utterance. It is one thing to write a good singable song, as all who have tried the feat will admit, and as the paucity of good songs for the voice, indeed, is sufficient in itself to prove. The lines of Mr Nicol fulfil the desideratum so difficult of attainment.

The following is another of our poet's addresses to the object of his affections, written when a cloud seems to have lowered upon his hopes of happi-

What balm can cure my wounded soul
What charm my sorrows can remove
When mountains rise and billows roll,
Between ms and the maid I love?
Amid the gloom which absence makes,
Hope trembling darts a feeble ray;
But pale Despair appears, and takes
The very soul of life away.

Once smiling pleasure round me play'd, Nor knew I sorrow's poison'd dart; These days are gone—remembrance sad Of joys departed wrings my heart. Hear, Heaven, the prayer of misery! Grant this request—I ask no more;

Another piece which we shall give a place to here, as a slight tribute to the memory of an unknown poet—a man of tender and feeling mind—is an address to the mavis, or thrush, called up by the sight of a barbarously rifled nest. Parents in the country, heedless or ignorant of the cruel propensities fostered by such acts of spoliation, are too apt, as we know from personal observation, to permit their children to carry away young birds from the nest, without a word of blame or remonstrance. In this unambitious little

piece, Mr Nicol speaks, we think, very feelingly for

"Stern Winter, with his angry showers,
No more on Tweed's fair banks remain'd;
But spring, array'd in blushing flowers,
O'er all the extended country reign'd.
On Leithen's side, at close of day,
I walk'd the shady groves among;
When, mournful from a neighbouring gray,
A mavis pour'd these notes along:
Sure, tender Pity, heavenly maid!
From man's abodes is driven away;
And, of his ruthless deeds afraid,
Through deserts wild is forced to stray.
Where, where, ah! where's the tender brood
I nourish'd with a parent's care—
Whom I, with pleasure, fill'd with food,
And guarded from the inclement air?
They're gone! they're gone! Ah, cruel Hest. And guarded from the inelement air?
They're gone! they're gone! Ah, cruel Heaven!
Dost thou no signs of anger show?
Behold the wretch, to whom is given
The empire o'er thy works below!
Behold the wretch, who beasts aloud
Of reason and a soul divine!
If that's his reason—mighty God!
I thank thee it was never mine

I thank thee it was never mme
Think, ruthless man, and blush for shr
Thy children prattling on thy knee,
Who fondly lisp their father's name,
Are not more dear than mine to me.
I fondly thought, but thought in vain,
To see my darlings wing their way;
To hear the woods resound their strain
And echo sporting with the lay!

And echo sporting with the my:
How base ingratitude appears!
Did man from me o'er suffer wrong?
How off my numbers charm'd his ears,
And soothed his soul the groves among.
But since my young are stolen away,
No pleasure I shall ever see;
To sorrow I resign the day,
And dumb my tuneful tongue shall be."

Assuming, as is fairly allowable to a poet, the character of a country swain, Mr Nicol addressed the following pleasing song to the object of his affections, in the corresponding character of a rustic maid.

in the corresponding character of a rustic maid.

"My dear little lassie, why, what's a' the matter
My heart's grown uneasy—it winns lie still;
I've waited, and waited, and a' to grow better,
But, can you believe me, I'm just growing iil?

My head's grown sae dizzy, and aye when I'm speaking
I sigh and am breathless, and fearfu' to speak;
I gaze on, and something I fain wad be seeking,
But, lassie, I kenna weel what I would seek. When we tedded the hay-field, I raked filta rig o't, And never grew weary the lang simmer's day; The rucks that you wrought at were easier bigget, And far sweeter scented around you the hay.

At hairst, when the kirn-suppers' joys made us checry
'Mang the lave o' the lasses I preed your sweet mou'
And, souf me! how queer I grew when I came near ye
My heart thrill'd with rapture, I canna tell how

When we danced at the gloaming, 'twos aye you I pitch'd on, And when you gaed by me how dowie I grow; There's something, dear lassie, about ye bewitching, That tells me my happiness centres in you."

Our rural poet evinced no mean powers in the department, also, of comic song; and we shall bring our specimens to a close by giving his "Halucket Meg," a piece which Allan Cunningham has thought not unworthy of a place in his collection of the "Songs of Scotland."

"Meg, cleanin' at Geordie's byre,
Wrought as gin her judgment was wrang;
Ilk daud o' the scartle struck fire,
While loud as a lavrock she sang.
Her Geordie had promised to marry,
An' Meg, a sworn fae to despair,
Not dreamin' the job could miscarry,
Already seem'd mistress an' mair!

My neibours,' she sang, ' aften jeer m And ca' me daft, halucket Meg, And ca' me daft, halucket Meg. And say, they expect soon to hear me I' the kirk, for my fun, get a fleg! And now, 'bout my marriage they clatter, And Geordie, poor tallow, they ca' An auld doitit hav're!! Nac mutter, He'll keep me aye brankin and braw!

He'll keep me aye brankin and braw!

I grant ye, his face is kenspeckle,

That the white o' his o'e is turn'd out,

That his black beard is rough as a heckie

That his mout to his lug's rax'd about;

But they needna let on that ho's crazy,

His pike-staff wull ne'er let him fat';

Kor that his hatr's white as a daisy,

For fient a hair has he ava!

For nent a har has he ava;
But a weel-plenish'd mailin has Geordle,
And routh o' gude gowd in his kist;
And if silier comes at my wordle,
His beauty I never will miss't
Daft gouks, wha catch fire like tinder,
Think love-raptures ever will burn!
But wi' poortith, hearts het as a cinder
Will cauld as an icicle turn!

There'll just be ac bar to my pleasure,
A bar that's aft fill'd me wi' fear,
He's sic a bard, near-be-gawn miser,
He likes his saul less than his goar!
But though I now flatter his failin',
An's swear nought wi' gowd can com
Gude scoth, it sail soon get a scailin'!
His bags sall be mouldie nac mair!

I dreamt that I rade in a chariot, A flunkle ahint me in green; While Geordie cried out he was harriet, And the saut tear was blindin' his een But though 'gainst my spendin' he swear I'li hae free him what ser's my turn; Let him slip awa when he grows wearie, Shame fa' me, gin lang I wad mourn!'

term "halucket" is explained by Dr Jamieson to me or hairbrained," and he quotes our author in alludi

But Geordie, while Meg was haranguin',
Was cloutin his breeks i' the bauks,
And when a' his failins she brang in,
His strang insate pikestaff he taks:
Designin' to rax her a lounder,
He chanced on the ladder to shift,
An' down frae the bauks, flat's a flounde
Flew like a shot-starn frae the lift!"

Mr Nicol, to whom the phrase "artless child of song" might have been happily applied, died in the year 1816.

#### MOZART'S REQUIEM.

MOZART'S REQUIEM.

ONE evening the illustrious composer, Mozart, was seated at his piano, not engaged in playing, but with his head resting upon his hand. His look was that of one who had just undergone some severe physical extrion, and is left by it weak and exhausted. A heetic flush was yet upon his cheek, and an unnatural glow in his fine large eyes. "My dear Wolfgang," said the wife of the musician, entering the room while he was in this condition, "you have again, I see, made yourself ill—worse than before. Oh, why, for my sake, will you not refrain from this incessant labour?" As she spoke, she kissed his pale brow tenderly, and a tear rose to her eye.

"It is in vain, my love," answered Mozart; "I can-

self ill—worse than before. Oh, why, for my sake, will you not refrain from this incessant labour?" As she spoke, she kissed his pale brow tenderly, and a tear rose to her eye.

"It is in vain, my love," answered Mozart; "I cannot avoid my destiny. Were I placed on a barren rock, or in the deserts of Africa, with neither instrument nor paper within a hundred miles of me, my thoughts would be equally intent on my divine art; I should exhaust myself not less than I do here. To follow out the suggestions of faney, and commit them to paper, is not the weakening or toilsome portion of my occupations. On the contrary, I derive pleasure and refreshment from the fulfilment of my conceptions. The preliminary workings of the brain are the causes of exhaustion, and those I cannot put a stop to. It is my fate, Constance; it is my fate." The composer seemed so much wearied as he uttered these words, that his attached wife pressed him to lie down upon the sofa, and endeavour to snatch some minutes of sleep. Mozart complied with her suggestion, and, having seen him comfortably placed, his wife retired. The ailing composer—for he had been ill, very ill, for some months—was not destined, however, to enjoy his repose for any length of time. He was roused by a servant, who informed him that a stranger desired to speak with him. "Show him this way," said the musician, rising from his recumbent position. The visiter was immediately introduced. He was a person of very striking appearance, tall and commanding in stature. His countenance was peculiarly grave, solemn, and even awe-striking; and his manners were dignified and impressive. Altogether, his aspect was such as to arrest the attention of Mozart in a forcible manner. "I come," said the stranger, after bowing courteously to the composer's salutation, "to request a peculiar favour from you. A friend, whose name I am required not to mention, wishes to have a solemn mass composed, as a requiem for the soul of a dear relative, recently lost, whose memory he is desirous of honouring

turned, and for some successive days he was confined to bed.

As soon as he was able he resumed his occupation, but, being too enthusiastic to proceed with only moderate diligence, he soon brought back his illness. Thus it was that the work was carried on by fits and starts. One day, when his wife was hanging over him, as he ast at his piane, he abruptly stopped, and said, "The conviction has seized me that I am writing my own requiem. This will be my own funeral service!"

At the end of the month, the stranger made his appearance punctually. "I have found it impossible to keep my word," said Mozart; "this work has interested me more than I expected, and I have extended it beyond my first design." "Then take a little additional time,"answered the stranger. "Another month," said Mozart, "and it shall be ready." "For this added trouble," returned the stranger, "there must be an additional recompense." With these words he drew his purse, and, laying down fifty ducats, took his

eave, with the promise to return again at the time

leave, with the promise to return again at the time appointed.

Mozart resumed his labours, and the requiem proceeded. Every day the composer grew more and more enthusiastic in the prosecution of his task, but every day his bodily powers became more and more enfeebled. The impression which he had communicated to his wife gained additional strength, and the more so as his endeavours to discover the name and character of the interesting and mysterious stranger proved unavailing. He had ordered a servant to follow the stranger on the occasion of his last visit, but the man had returned with the announcement that the object of his pursuit had suddenly disappeared from before his eyes. Inquiries amongst friends were equally fruitless. These circumstances, as we have said, deepened the conviction on Mozart's mind that he was composing his own requiem, and composing it at no earthly command. This idea, so likely to impress the romantic spirit of the great composer, rather favoured than impeded the completion of the requiem. As his physical powers decayed, the zeal of the composer increased. He finished the task, as far as he considered necessary, and, almost immediately afterwards, the soul of Mozart left its mortal tenement.

When the stranger returned—for he did return at the appointed day—Mozart was no more. Strange to tell, the visiter showed now no anxiety for the requiem, and it was left to serve as a commemoration of the great master himself. It is yet well known by the name of Mozart's Requiem.

This story has been often told in nearly the above terms. Mr Hogarth's agreeable volume, "Musical History, Biography, and Criticism," enables us to add all that is known or conjectured with respect to the mysterious stranger. "The Requiem was afterwards completed by Sussmayer, a composer of considerable eminence, who was a friend of Mozart's family. The circumstances under which this work was composed, and the state in which it was when Mozart's pen was arrested by death, have occasioned, at different times, a good dea

# OPIUM-SMOKING.

LORD JOCELYN, late military secretary to the China mission, in a small work just issued from the press, "Six Months with the Chinese Expedition," makes the following observations on opium-smoking, which prevails not only in China, but in the adjacent islands of India:—

the following observations on opium-smoking, which prevails not only in China, but in the adjacent islands of India:—

"One of the objects at this place [Singapore] that I had the curiosity to visit, was the opium-smoker in his heaven; and certainly it is a most fearful sight, although perhaps not so degrading to the eye as the drunkard from spirits, lowered to the level of the brute, and wallowing in his filth. The idiot smile and death-like stupor, however, of the opium debauchee, has something far more awful to the gaze than the bestiality of the latter. Pity, if possible, takes the place of other feelings, as we watch the faded check and haggard look of the being abandoned to the power of the drug; whilst disgust is uppermost at the sight of the human creature levelled to the beast by intoxication. [What beast!—we do not know any animal but man who indulges in intoxicating liquors.]

One of the streets in the centre of the town is wholly devoted to the shops for the sale of this poison; and here in the evening may be seen, after the labours of the day are over, crowds of Chinese, who seek these places to satisfy their depraved appetites. The rooms where they sit and smoke are surrounded by wooden couches, with places for the head to rest upon, and generally a side-room is devoted to gambling. The pipe is a reed of about an inch in diameter, and the aperture in the bowl for the admission of the opium is not larger than a pin's head. The drug is prepared with some kind of conserve, and a very small portion is sufficient to charge it, one or two whiffs being the utmost that can be inhaled from a single pipe, and the smoke is taken into the lungs as from the hookha in India. On a beginner, one or two pipes will have an effect, but an old stager will continue smoking for hours. At the head of each couch is placed a small lamp, as fire must be held to the drug during the process of inhaling; and from the difficulty of filling and properly lighting the pipe, there is generally a person who waits upon the smoker to

of the drug, after long habit, no language can explain; and it is only when to a certain extent under its influence that their faculties are alive. In the houses devoted to their ruin, these infatuated people may be seen at nine o'clock in the evening in all the different stages;—some entering, half distracted, to feed the craving appetite they had been obliged to subdue during the day; others laughing and talking wildly under the effects of a first pipe; whilst the couches around are filled with their different occupants, who lie languid, with an idiot smile upon their countenances, too much under the influence of the drug to care for passing events, and fast merging to the wished-for consummation. The last scene in this tragic play is generally a room in the rear of the building—a species of dead-house—where lie stretched those who have passed into the state of blies the opium-smoker madly seeks—an emblem of the long sleep to which he is blindly hurrying."

Lord Jocelyn contends that the stoppage of the opium trade from India would prove most disastrous to British interests in that great empire. The rajahs and petty princes are the chief growers of the poppy, and it is important to conclinate their favour. The best opium is produced in Malwa, a district of India. From that quarter it pays at Bombay a duty of 125 rupees (L.12, 10s.) per chest, fetching in that market from 400 to 500 rupees (L.40 to L.50). This quantity sells on the Chinese coast for 760 dollars (L.151, 5s. 4d.), and perhaps much more. The temptation to get so large a profit sets all plans for stopping the trade at defiance. "The opium-trade (his lordship observes), however hateful it may appear in the eyes of many, is, it must be recollected, a source of great benefit to the Indian government, returning, I have heard, a revenue of upwards of two millions and a half yearly. It therefore becomes those who are so eager for its suppression to point out some method of making up the serious defalcation of revenue that must neces sarily accrue to the

#### TRAVELS OF BURCKHARDT.

TRAVELS OF BURCKHARDT.

John Lewis Burckhardt, one of the most enterprising and indefatigable of modern travellers, was a Swiss by birth, being descended from a respectable family long established at Kirchgarten, near Lausanne. His father had been tried and persecuted by the French republic, on a charge of assisting the Austrians during the wars consequent on the Revolution, and was thus obliged to remove from his native district to Basle, where he entered a Swiss corps in the service of England. John Lewis, who was born about the year 1785, received his early education at Basle, and was afterwards placed at the University of Leipsic. From childhood, he was attached to the British nation, and, on completing his academical course, resolved to visit England. The celebrated Blumenbach, to whom he had recommended himself by his talents, application, and good conduct, gave him letters to Sir Joseph Banks and other men of eminence in London. Already had young Burckhardt devoted himself in thought to the arduous occupation of an exploratory traveller, and, on his arrival in England, the African Association received and accepted his offer of journeying into the interior of Africa. The plan of the expedition being settled, Burckhardt diligently set about the necessary preparations for his enterprise. It had been resolved that he should make the perilous attempt to pass as a Mussulman in the course of his journey; and accordingly he suffered his beard to grow, accustomed himself to the dress and manners of the East, and made himself a proficient in the Arabic tongue.

In the beginning of 1809, he left England, and appeared soon after in Aleppo in the character of a Mussulman, assuming the name of Ibrahim Ben Abdallah. Two years he spent here, perfecting himself in the castern languages, and acquiring a thorough acquaintance with the Koran, and the religion and laws of Islamism. With a degree of patience almost unparalleled, he then made various exploratory to his great African project. From regular journals which he kept

Burckhardt as a traveller will chiefly depend, are those made by him in his tour through Arabia. He was the first traveller who gave a minute and accurate account of the pilgrimages to Mecca and Medina, and also the first who found out the site of the city of Petra, the capital of ancient Edom, so remarkable for its rock-sculptures. Altogether, the journeys of Burckhardt are so deeply interesting, and evince such an amount of patience under toil and suffering on the part of the traveller, that we believe some excerpts from his diaries will prove acceptable to every reader of the present work.

of the present work.

The two volumes drawn up from Burckhardi's notes, entitled "Travels in Arabia," are chiefly devoted to an account of Talestine and the holy cities of the Mahometans, visited by the traveller in the character of a true believer. There was great boldness shown in the attempt to assume such a character, because, had he been detected, his life would not have been worth an hour's purchase. However, the adventurous Swiss joined a party of pigrims, who, in the spring of 1814, crossed the Red Sea to Djidda, the escaport of Mecca, the principal of the two holy cities. In Djidda, Sheik Ibrahim, as Burckhardt called himself, was taken ill and ran short of money. His condition became deplorable; but at length Mehemet Ali, the Pacha of Egypt, who was them in Arabis, heard of his misfortunes, and sent for him to the camp at Tayf. At the pacha's head-quarters, the traveller received a loan of money, which induced him to set out by himself for Mecca, being determined to see that city at all risks. The cities of Mecca and Medina are situated in the Arabian province of Hedjas, on the eastern coast of the Red Sea, and nearly under the tropic of Cancer. Arriving at Mecca, Mr Burckhardt found nearly 70,000 pilgrims there assembled. His saw this immens multitude assume the white uniform appointed for the occasion, and undergo the stated number of ceremonial ablutions; he joined them in walking round the Kaaba, or holy atone, seven times, each circuit being accompanied by a kins; and, in short, under his ostensible character of a Mahometan, the Christian traveller gained an insight into all the mysteries hitherto confined to the breasts of true believers.

With a small caravan of hadjis, or pilgrims, Mr Burckhardt proceeded from Mecca to Medina. The last of these cities is held as careely inferior to the first in sanctity, containing, as it does, the tomb of the prophet Mahommed. This, the "precious jewel of Medina," is contained in a large mesque, a hundred and sixty-tive paces in length, and a flundred and thi

the behef, that whatever may be their superstition and fanaticsm, Mahommedans are never inclined to make as many pecuniary sacrifices for their religious establishments, as Catholic and even Protestant Christians do for theirs.

The ceremonies on visiting the mosque are the following. At first the pilgrim, before he enters the town, is to purify himself by a total ablution, and, if possible, to perfume his body with sweet edours. When he arrives in sight of the dome, he is to utter some pious ejaculations. When he intends to visit the temple, the cicerone, or, as he is here called, mezowar, leads him into the gate called Bab-es-Salam, passing his right foot first over the threshold, which is the general custom in all mesques, and particularly insisted upon here. While reciting some prayers, he stops forward into the Rodha, where he performs a short prayer, with four prostrations, as a salutation to the mosque, during which he is enjoined to recite the two short chapters (109th and 112th) of the Koran. He then passes through one of the small doors of the Rodha, and walks slowly towards the railing of the Hedjra, before the western window of which, on its south side, he takes his stand; with arms half raised, he addresses his invocations to Mahommed, in the words 'Salam aleyka ya Mahommed, Salam ya Rasoul illah,' &c., recapitulating about twenty of the different surnames or honourable titles of Mahommed, and prefixing to each of them 'Salem aleyk.' He next invokes his intercession in heaven, and distinctly mentions the names of all those of his relations and friends whom he is desirous to include in his prayers; it is for this reason, that an inhabitant of Medina never receives a letter from abroad, without being entreated, at the end of it, to mention the writer's name at the tomb of the Prophet. If the pilgrim is delegated on the pilgrimage for another, he is bound here to mention the name of his principal. In this prayer are on the toward of hell-fire be their lot.'

After these prayers are said, the visiter i

female saint), who likewise receive gifts in their hand-kerchiefs. In the Rodha stand the eunuchs, or the guardians of the temple, waiting till the visiter has finished his last prayer of salutation, to wish him joy on having successfully completed the zyara or visit, and to receive their fees; and the great gate of Babes-Salam is constantly crowded with poor, who closely beset the visiter on his leaving the mosque; the porter also expects his complement, as a matter of right. The whole visit cost me about fifteen piastres, and I gave ten piastres to my cicerone; but I might perhaps have got through for half that sum.

The ceremonies may be repeated as often as the visiter wishes; but few perform them all, except on arriving at Medina, and when on the point of departing. It is a general practice, however, to go every day, at least once, to the window opposite Mahommed's tomb, and recite there a short prayer: many persons do it whenever they enter the mosque. It is also a rule never to sit down in the mosque, for any of the usual daily prayers, without having previously addressed an invocation to the Prophet, with uplifted hands, and the face turned towards his tomb. A similar practice is prevalent in many other mosques in the east, which contain the tomb of a saint. The Moslem divines affirm, that prayers recited in the mosque of Medina are peculiarly acceptable to the Deity, and invite the faithful to perform this pilgrimage, by telling them that one prayer said in sight of the Hedjira is as efficacious as a thousand said in any other mosque except that of Mecca."

The town of Medina is described as tolerably well built, but having no other source of wealth than the pilgrimages, and containing no object of especial interest but the great mosque. In this respect, moreover, it does not enjoy advantages equal to those of Mecca. Immense numbers of pilgrims certainly visit Medina yearly; but the visit is rather regarded as a meritorious action than as a duty incumbent on the faithful. Yet he who recites forty praye

# NAVAL WARFARE OF ENGLAND AND AMERICA.

SECOND ARTICLE.

AMERICA.

SECOND ARTICLE.

THE early part of the year 1813 was signalised by a few naval encounters between the British and the Americans, though not of any serious importance, and in no respect contributing to allay the vengeful passions of either party. At this time, the United States' ship-sloop Hornet, Captain Lawrence, kept roving about the American coast, and was the terror of many a craft engaged in the merchant service. On the 14th of February, when cruising off Pernambuco, she captured an English brig with 23,000 dollars in specie on board. In a few days afterwards, near the entrance to Demerara river, she encountered the British frigate Peacock, which she likewise captured. The Peacock almost immediately sunk, in consequence of the damages she had sustained during the action.

The next was one of the most desperate though brief engagements which took place during the war, being that between the British frigate Shaunon, Captain Broke, and the United States' frigate Chesapeake, Captain Lawrence, who had previously commanded the Hornet. The meeting of these vessels was off the harbour of Boston, and took place on the 1st of June 1813. Both commanders were full of high hopes of conquest. Following the account given of the murderous affair by James, the Chesapeake came down upon the Shannon's starboard quarter, with three ensigns flying, and led Captain Broke to expect that she would pass under his stern, and engage him on the larboard side; he therefore directed his men, as she passed, to lie down flat, so as to avoid in some degree the raking fire. But Captain Lawrence, oither overlooking or waiving this advantage, at thirty-five minutes past five, luffed up, within half-oistol shot, upon the Shannon's starboard-quarter. Some shots from the Shannon's starboard-quarter. Some shots from the Shannon's starboard-quarter. Some shots from the Shannon's guns, as fast as the men could level them with precision. In about seven minutes from the commencement of the action, the Chesapeake, having her jib-sheet and f

\*In No. 68 of the present work, an account of Macca, and are monitor there performed, was given at such length, as ron it proper for us on the present occasion to confine our atten-change to the account of the hely cities, Hedina.

been accumulated round the prophet's tomb, but little of this has escaped the rapacity of invaders and unscrupulous Arab chiefs. Between the curtain of the prophet's tomb and the encircling railing, glass lamps are hung up, which are kept burning all night. Over the enclosure, or Hedjra, is placed a lofty does, rising far above the other domes of the city, and ornamented with a large globe and a crescent, both said to be of far above the other domes of the city, and ornamented with a large globe and a crescent, both said to be of pure gold. Next to the Hedjra, the most sacred place of the mosque, is a place called El Rodha, or the Garden, pointed out by Mohammed in the words, "Between my tomb and my pulpit is a garden of the gardens of Paradise." Excepting as regards the flowers painted upon the columns of the Rodha, there is no other trace of a garden about it. "The entrance to the Rodha, near Bab-es-Salam, has a splendid appearance: the gaudy colours displayed on every side, the glazed columns, fine carpets, rich pavement, the gilt mscriptions on the wall to the south, and the glittering railing of the Hedjra in the background, dazzle the sight at first; but, after a short pause, it becomes evident that this is a display of tinsel decoration, and not of real riches. When we recollect that this spot is one of the holiest of the Mabommedan world, and celebrated for its splendour, magnificence, and costly is one of the holiest of the Mahommedan world, and celebrated for its splendour, magnificence, and costly ornaments, and that it is decorated with the united pious donations of all the devotes of that religion, we are still more forcibly struck with its paltry appearance. It will bear no comparison with the shrine of the most insignificant saint in any Catholic church in Europe, and may serve as a convincing proof, that in pious gifts the Mahommedan have at no period equalled the Catholic devotes; without noticing many other circumstances, which help to strengthen the belief, that whatever may be their superstition and fanaticism, Mahommedan are never inclined to make as many pecuniary sacrifices for their religious establishments, as Catholic and even Protestant Christians do for theirs.

The ceremonies on visiting the mosque are the

Broke parried the middle fellow's pike, and wounded him in the face, but instantly received from the man on the pikeman's right a blow from the butt-end of a musket, which bared his skull, and nearly stunned him. Determined to finish the British commander, the third man knocked him down with his broadsword, but was himself next instant cut down by one of the Shannon's seamen. Captain Broke and his foe now lay side by side, each, although nearly power-less, struggling to regain his sword, when a marine dispatched the American with his bayonet. Shortly, the surrender of the vessel was complete. Between the discharge of the first gun and the period of Captain Broke's boarding, eleven minutes only elapsed, and in four minutes mere the struggle was at an end. Hundreds of persons from Boston and the surrounding neighbourhood, standing on a commanding part of the shore, were spectators of the seene.

The force of the respective combatants was very nearly equal. The Shannon had 25 broadside guns, carrying 538 pounds weight of metal, 306 men and 24 boys, and was 1036 tons burden. The Chesapeake had 25 broadside guns, carrying 539 pounds, 376 men and 5 boys, and was 1135 tons burden. The Shannon sustained a loss of 24 killed and 59 wounded, while the Chesapeake had 47 killed and 59 wounded, while the Chesapeake had 47 killed and 59 wounded, while the Chesapeake had 47 killed and 59 wounded, while the Chesapeake had 47 killed and 59 wounded. Among the mortally wounded was Captain Lawrence, who died shortly afterwards, and was buried with military honours at Halifax, to which the prize was carried. The victory gained by Captain Broke caused a considerable sensation in England, and seemed to have been felt as a breaking of the spell which had so long bound the British havy in its conflicts with that of the United States. The conquest, however, was attained chiefly by Captain Broke's extraordinary promptitude in boarding after coming to close quarters, and was succeeded by a much greater number of defeats than victories.

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bound the British navy in its conflicts with that of the United States. The conquest, however, was attained chiefly by Captain Broke's extraordinary promptitude in boarding after coming to close quarters, and was succeeded by a much greater number of defeats than victories.

Passing over some minor events of the war, including the loss of the British 14-gun schooner Dominica, captured by the Decatur, a Franco-American privateer, we come to the action between the British brig-sloop Pelican, Captain Maples, sixteen thirty-two-pound carronades and two sixes, and the American brig-sloop Argus, Captain Allen, eighteen twenty-four-pound carronades and two long twelves. On the 14th of August, these vessels encountered each other in St George's channel, about five leagues from St David's Head. When within grape-distance, broadside firing commenced, and in a few minutes Captain Allen was severely wounded, and the mainbraces, main spring-stay, gaff, and try-sail mast of the Argus were shot away. Shortly afterwards, shots from the Pelican did still further damage to the enemy's rigging, and then ranging up on her star-board-quarter, poured in a fire with destructive effect. Farther damage being done to the wheel-ropes and rigging of the Argus, she was entirely unmanageable, and at the mercy of the Pelican, whose commander gave orders to board; which being done, the American was at once compelled to submit. The clever gunnery of the Pelican, so different from that ordinarily displayed by other British ressels at the time, appears to have been the cause of the successful issue of the engagement. On board the Pelican there were only two killed and five wounded; the crew of the Argus suffered more severely, six being killed and eighteen wounded. The captain died after his unfortunate vessel had been brought into Plymouth.

The next action in course of events took place (September 5) off the American coast, at no great distance from Portland in the United States, between the British brig-sloop Boxer, twelve eighteen-pound carr

and that of the Enterprise on Lieutenant Edward McCall. At half-past three, the Euterprise ranged ahead, and rounding to on the starboard tack, raked the Boxer with starboard guns, and shot away her main-topmast and fore-topsail-yard. The American then set her fore-sail, and, taking a position on the starboard-bow of her new wholly unmanageable antagonist, continued pouring in successive raking fires until forty-five minutes past three, when the Boxer surrendered. This defeat was caused not only by the damages done to the vessel, but the weakened condition of the Boxer's crew; the lieutenant-commander, owing to the imprudent absence of the two midshipmen, had not an officer beneath him, and the master's mate and three seamen deserted their quarters during the action. Besides her commander, had three or four killed and eleven wounded. The prize was carried into Portland; and there, on the 7th of September, the bodies of the two commanders were buried with military and civic honours.

A few days after this unfortunate event, Lake Erie was the seene of a desperate battle between a British and an American squadron. After a furious action of nearly three hours, in which the British had 3 officers and 38 men killed, and 9 officers and 35 men wounded, and the Americans 27 officers and men killed, and 96 wounded, the latter gained the day. The British vessels, it is mentioned, were so poorly equipped, that they had no matches they could use, and were obliged to fire pistols at their guns to set them off. This, with some desultory warfare on Lake Ontario and on the coast, closed the events of 1813—the suffering on both sides still leading to no useful result.

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The next year, 1814, opened with the temporary success of the British naval force. On the 15th of February, the British 36-gun frigate Phobe, and her consort the Cherub, encountered the American 32-gun frigate Essex-Junior, off the coast of Valparaiso; and, after a running and severe fight of about two hours, the latter was conquered. On the 20th of April, the British 36-gun frigate Orpheus, and twelve-gun schooner Shelburne, encountered the American frigate Frolic, which they captured, after firing only a few shots. Some days previous to this occurrence, the British eighteen-gun frigate Epervier, sailed from Port-Royal, Jamaica, for Halifax, having taken on board 118,000 dollars in specie, and on the 29th met in with the American 22-gun ship-sloop Peacock; preparation on both sides for battle was the immediate consequence. The narrative given of the engagement shows in what an ill-prepared condition the British vessel was for such an encounter. At the first discharge, the three aftermost carronades became unshipped by the fighting-bolts giving way, and subsequently the carronades on the starboard side were dislodged in the same manner, while the main-boom, sails, and rigging, were cut in pieces by the enemy's fire. There was, in short, a general disablement on board the Epervier; and the crew having declined to follow the captain in an attempt to board, he was compelled to submit. This is allowed to have been a very disgraceful affair on the part of the crew of the British vessel, whom James describes as being at the time in a state of disaffection, for what cause, however, we are not informed. The British sustained a loss of eight killed and fifteen wounded, while the Americans had none killed and only two men wounded.

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British sustained a loss of eight killed and fifteen wounded, while the Americans had none killed and only two men wounded.

In the remaining naval engagements of any consequence during this ill-advised, and, on the part of the British, ill-conducted, war, the Americans were on seven occasions victorious and the British only once. It would be tiresome to go over the whole of these, and we shall content ourselves with the following one or two cases. On the 28th of June (1814), at daylight, while cruising in the Atlantic, the British eighteengun brig-sloop Reindeer, Captain William Manners, discovered and chased the United States' ship-sloop Wasp, commanded by Johnston Blakely. In the course of the day, the vessels approached each other, and prepared for action; and at about two in the afternoon, the Wasp hoisted her colours, and fired a gun to windward; immediately the Reindeer, whose colours had been previously hoisted, fired a gun also to windward, as an answer to the challenge. "At a quarter past three, the Reindeer, being distant about sixty yards on the Wasp's starboard and weather quarter, opened a fire upon her boat-carronade, mounted upon the top-gallant forecastle. This she repeated four times; when at twenty-six minutes past three, the Wasp having put her helm a-lee, luffed up, and commenced the action. The Reindeer returned the fire with spirit; and a close and furious engagement ensued.

ment ensued.

After the mutual cannonade had lasted about half an hour, the Reindeer, owing to her disabled state, fell with her bow against the larboard-quarter of the Wasp. The latter immediately raked her with dreadful effect; and the American riflemen in the tops picked eff the British officers and men in every part of the deck. It was now that Captain Manners showed himself as great a hero as any in ancient or modern times. The calves of his legs were shot away early in the action, yet did he keep the deck, encouraging his crew, and animating by his example the few officers remaining on board. A shot passed through both his thighs. He fell on his knees, but

quickly sprung up, and, though bleeding profusely, resolutely refused to quit the deek. Perceiving the dreadful slaughter which the musketry in the enemy's tops was causing, he called out to his men—'Follow me, my boys—we must board them!' While climbing into the rigging, two balls from the tops penetrated his skull, and came out beneath his chin. Placing one hand on his forchead, the other convulsively brandishing his sword, he exclaimed 'Oh God!' and dropped lifeless on his own deck. Having lost, besides her captain, nearly the whole of her officers and more than half her crew, the Reindeer was wholly unable to oppose the Wasp's overwhelming numbers; accordingly, at about four o'clock, the American crew rushed on board, and received possession of their hard-earned trophy from the captain's clerk, the senior officer alive on deck."\* The Reindeer was dreadfully shattered, and out of her crew of 98 men and 20 boys, sustained a total loss of 25 killed and 42 wounded, most bf them dangerously. One of the men was wounded in a horrible manner in the head by a ramrod, which, before it could be extracted, required to be sawed off close to the skull; the man, notwithstanding, recovered. The Wasp, out of a crew of 173 men and 2 boys, had 11 killed and 15 wounded.

The Reindeer being too much battered to be carried off as a prize, was set fire to and destroyed. The Wasp then steered for Lorient to refit and renovate her crew. On the 27th of August, being again in trim for sea, this American cruiser set off on a new expedition, and on the 1st of September fell in with the British eighteen-gun brig-sloop Avon, Captain the Honourable James Arbuthnot. The engagement was brief. The Wasp having fired her twelve-pound carronade, the Avon replied to it by a discharge from her larboard guns. The Wasp then kept away, and running under the brig's lee, opened her broadside. In a few minutes, the rigging and masts of the Avon were so much disabled, that she became unmanageable: in this state, with the "usual defects" in gun fastening

wounded.

Peace with France in 1814, by opening the continent to American commerce, hitherto excluded by British policy, naturally removed one of the grounds of quarrel, and opened the way for peace with tha United States. On the 24th of December 1814, a treaty of peace, accordingly, was effected at Ghent, which left, however, the question of right of search and other matters on the ground on which they had previously stood. The Americans, as we have seen, were most successful in their naval warfare; but, after all, that was a trifling compensation for ruined comwere most successful in their naval warfare; but, after all, that was a trifling compensation for ruined commerce, and for being brought to the very verge of national dismemberment. The lesses of the British never made any distinct impression on the nation, otherwise than teaching a tolerably sound lessen in discretion, and leading to many important improvements in naval affairs. We sincerely trust that both nations, united by a thousand inextricable ties, and profiting by experience, will in all time coming avoid every description of warlike collision, and exist in the happiest terms of amity and peace.

A French gentleman in Paris, who some time ago made known his discovery of a plan of preserving dead bodies from putrefaction by injecting chemical solutions into the veins, and themee through the whole mass, lately read a paper to the Academy of Soiences on preserving meat by similar processes. It is thus alluded to in the Literary Gazette of April 3:—"He remarked that, under the name of gelatine, three distinct substances were commonly confounded—geline, geléc (jelly), and gelatine properly so termed. The seemal of these substances was deduced from the first by means of water and heat; and the third, better known as glue, from the first, by air and heat. He had found that the only two substances in animal bodies liable to putrefaction were the geline and the albumine; and it was to prevent the action of the putrefying process on these substances that his experiments had been directed. The common method of salting meat was not only slow and expensive, but did not always effect its object, and much altered the nutritive powers of the meat. The method of preservingmeat by exhausting the air from it, and keeping it in hermetically closed vessels, was good in theory, but by no means easy of practice. He had discovered that the injection of an aluminous solution caused the preservation of the animal substance without altering its nutritive qualities. Neither the sulphate of alumine nor the acctate admitted of ready application, independently of their communicating an unpleasant taste, and he had therefore adopted the chlorine of alumine in a very pure state, such as at 10 degrees of Baumé's areameter. With two pounds of this chemical salt, and sir quarts of distilled water, a liquid fit for all purposes of this kind would be obtained, and it required only three pounds' weight of this liquid to inject a whole ox. The method was this: The carotid artery and jugular voin PRESERVING MEAT.

<sup>.</sup> James's Naval History; also Naval Occur

were opened simultaneously, so as to allow as much blood as possible to escape; a syphon was then introduced, downwards, into the carotid artery; the jugular vein was closed by ligature, and the injection was made. When the animal was perceived to be sufficiently injected, the syphon was withdrawn, and the artery tied up; after twenty minutes the body might be skinned and cut up according to the usual methods, only the bones and the fat might be left along with the flesh, being equally preserved from decomposition by the injection. The only part of the animal spoiled by the injection was the lungs. The flesh might then be hung up in the open air, if flies were carefully prevented from depositing their eggs in it, and the meat would keep in this way a long time perfectly fresh and good. If the meat were to be kept for a very long period, it would be necessary to wash it with a solution of chlorure of sodium at 10 degrees, and chlorure of slumine; and the meat should then be hung up in a current of hot air in a chimney-corner. When dried, the meat, thus prepared, should be put in casks hermetically closed. Such meat, before being cooked, slumld be soaked in water for twenty-four hours. If, however, the meat was to be kept fresh (not dried), it should be piled up in casks, and a saturated solution of chlorure of sodium, or of common salt, should be powed over it to prevent it from getting mouldy. All such meat should be boiled only half the time that newly-killed meat required. He had fod some dogs for three months on meat so prepared, and had found it perfectly nutritious. Many improvements and modifications would, he had no doubt, be introduced into his method when it came to be applied on a large scale, but he was sanguine as to its general results; and he produced specimens of meat preserved fresh in this way for two and three years. A commission was named to report on this process."

## HIGHLAND TRADITIONS.

In the number of the Statistical Account of Scotland noticed by us a fortnight ago, under the head Kildonan, Sutherlandshire, the author offers some traditional anecdotes of the clan Gun, a name apparently identical with that of Gwynne among the Welsh. These traditions are curious, and give a vivid idea of the unruly manners of a past age.

rently identical with that of Gwynne among the Welsh. These traditions are curious, and give a vivid idea of the unruly manners of a past age.

"Towards the end of the fifteenth century, the chief of the clan Gun was George Gun, who lived in feudal dignity in his then impregnable castle of Halbury; but he was better known as the Crowner Gun, or, as he was called by the Highlanders, "N'm Braistack-more," from a great brooch which he wore as the badge or cognisance of his office of crowner. He had a deadly feud with the chief of the Keiths; and having met in St Tyre's chapel for the purpose of effecting a reconciliation, but without success, they there solemnly agreed to decide their quarrel, if they could not do so amicably on a future day, by equal combat between twelve sons or relatives of each chieftain. This compact was concluded by mutual vows, accompanied with religious rites within the chapel, that the meeting would take place in a solitary part of the country, where no interruption could occur, and the secort of each leader was fixed at twelve armed horsemen. The crowner had been twice married, and had a numerous family of sons; but some of them resided in Sutherland, and it was also agreed that he should form his party there, and proceed into Caithness with them by the Strathmore route, while the Keiths would move, on the appointed day, towards the confines of Sutherland, and in the same direction, so that the two parties would meet in a retired district, remote from any chance of being disturbed. The chiefs, each followed by twelve horses and their riders, came within sight of each other on the appointed route, and soon thereafter met at a burn called Alt-na-gawn, below the glut of Strathmore. The crowner and the leader of the Keiths and consequently the latter party had wenty-four men opposed to the twelve followers of the Keiths, and consequently the latter party had wenty-four men opposed to the twelve followers of the crowner. This vile stratagem instantly revealed to the Guns that their destructio

rid imprecations, and remorseless vows of each clan's never-dying vengeance, which raised to madness the rage of the combatants.

The Guns fought most desperately, but could not withstand the great odds that opposed them; and after a long-continued struggle, the survivors on both sides were so much exhausted, that the combat was mutually dropped—the Keiths being so far the victors as to leave the field with their banner displayed, and to be able to carry with them their slain companions; while in the ranks of the Guns, the crowner and severe of his party were killed, and the remaining five were all severely wounded. The Keiths proceeded to Dilred Castle, in Strathmore, then occupied by Sutherland of Dilred, where they were hospitably entertained. The five surviving Guns, who were all sons of the crowner, also retired, but tarried at another stream, since then called Alt-Torquil, after Torquil Gun, one of the survivors, who there dressed the wounds of his brothers. Towards evening, Henrybeg, the youngest of the surviving brothers of the Guns, proposed that they should follow the Keiths, and endeavour to obtain revenge, even by stratagem

such as the Keiths had recourse to; but his brothers considered such a step as leading to their certain destruction. Henry, however, could not be restrained from his purpose, and swore that he never would rest until he should kill a Keith, and recover possession of his father's sword, helmet, shirt of mail, and brocch of office, which the Keiths had taken off the dead body of the crowner. Two of the brothers were so severely wounded that they could not move to any great distance, but the other two accompanied Henry, who arrived at Dilred Castle soon after nightfall. On approaching the castle, its wooden windows or shutters were found open, and around a large fire in the lowest apartment the survivors of the Keiths were quaffing bumpers of ale; and Henry, who went close to one of the windows, heard them narrate, with boisterous delight, the lesses sustained by the Guns. The chief of the Keiths, not apprehensive of any danger, accidentally approached the window where Henry stood, and the latter then bent his bow, and in another instant his arrow pierced the chieftain's heart; Henry at the same time boldly accompanying the deadly flight of his arrow with the exclamation (afterwards used in the North Highlands as a proverb) of "The Gun's compliments to Keith." The old chief dropped down dead; a panie seized the other Keiths; and the three Guns, having darted forward to the door of the castle, slew some of the first persons who ventured out by it; but finding that they could not retain their position long, Henry and his two brothers retired silently under cover of the darkness of the night, and hurried back to the assistance of the other brothers, who had been unable to accompany them."

We think we have seen good romances and ballads turning upon worse anecdotes than the following, which occurs in the article on Wick (county Caithness):— "The last of the male line [of the Cheynes], Sir Reginald, is yet, under the designation of Morar na Shien, famous in the Highland districts as a mighty hunter. He was most anxious

# A PUBLISHER'S PRIZE

A PUBLISHER'S PRIZE.

In a late edition of Fielding's Novels, we find the following passage respecting the author's sale of Tom Jones to the original publisher:—

"Fielding having finished the manuscript of Tom Jones, and being at the time hard pressed for money, went with it to one of your second-rate booksellers, with a view of selling it for what it would fetch at the moment. He left it with this trader in the children of other men's brains, and called upon him the succeeding morning, full of anxiety both to know at how high a rate his labours were appreciated, as well as how far he might calculate upon its producing him wherewithal to discharge a debt of some twenty pounds, which he had promised to pay the next day. He had reason to imagine, from the judgment of some literary friends to whom he had shown his manuscript, that it should at least produce twice that sum. But, alas! when the book-seller, with a significant shrug, showed a hesitation as to publishing the work at all, even the moderate expectations with which our Cervantes had buoyed up his hopes, seemed at once to close upon him at this unexpected and distressing intimation.

'And will you give me no means of hopes?' said he in a tone of despair.

'Very faint ones, indeed, sir,' replied the bookseller; 'for I have scarcely any that the book will move.'

'Well, sir,' answered Fielding, 'money I must have for it; and, little as that may be, pray give me some idea of what you can afford to give for it.'

'Well, sir,' returned our bookseller, again shrugging up his shoulders, 'I have read some part of your 'Jones,' and in justice to myself, must even think again before I name a price for it. The book will sot soce; it is not for the public; nor do I think that any inducement can make me offer you more than twenty-five pounds for it.'

'And that you will give for it?' said Fielding, quickly. 'Really, I must think again, and will endeavour to make up my mind by to mornow.'

'Well, sir,' replied Fielding, 'I will look in again tomorrow morning. The book

more credit to his judgment. Fielding, therefore, posted away to his appointment the next morning, with as much apprehension lest the bookseller should stick to his bargain as he had felt the day before lest he should altogether decline it. To his great joy, the ignorant trafficker in literature, either from inability to advance the money, or a want of common discrimination, returned the manuscript very safely into Fielding's hands. Our author set off, with a gay heart, to his friend Thomson, and went in company with him to Mr Andrew Millar, a popular bookseller of that day. Mr Millar was in the habit of publishing no work of light reading but on his wife's approbation; the work was, therefore, left with him, and some days after, she, having perused it, bade him by no means let it slip through his fingers. Millar, accordingly, invited the two friends to meet him at a coffee-house in the Strand, where, having disposed of a good dinner and two bottles of port, Thomson at last suggested, 'It would be as well if they proceeded to business.' Fielding, still with no little trepidation, arising from his recent rebuff in another quarter, asked Millar what he had concluded upon giving for his work. 'I am a man,' said Millar, 'of few words, and fond of coming to the point; but really, after giving every consideration I am able to your novel, I do not think I can afford to give you more than two hundred pounds it'. 'What!' exclaimed Fielding; 'etwo hundred pounds!' 'Indeed, Mr Fielding,' returned Millar; 'indeed, I am sensible of your talent, but my mind is made up, 'Two hundred pounds!' 'Indeed, Mr Fielding,' returned Millar; indeed, I am sensible of your talent, but my mind is made up, and I cannot give more.' 'Allow me to ask you,' continued Fielding, 'to ask you—whether—you—are—se—rious!' 'Never more so,' replied Millar, 'in all my life; and I hope you will candidly acquit me of every intention to injure your feelings or depreciate your abilities, when I repeat that I positively cannot afford you more than two hundred

# WOMAN THE NATURAL ADVISER OF MAN.

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On this subject, we find the following remarks in a newspaper:—Husbands, in general, mistake the nature of the dominion granted them over their wives, and absurdly fancy they thence have a right to be tyrants; but the proper dominion of a man over his wife is not to make her a slave. The use of this dominion is to preserve order and peace in the family, for which end the husband's will is to be obeyed, when it happens conscientiously to differ from the wife's. But though, for the sake of peace, the man's will is to be the rule, the wife is his natural adviser and counsellor, whose opinion he should always listen to and follow, if he find it more just and reasonable than his own. It is contrary to the laws of God and nature for a husband to require blind obedience from his wife. But many men foolishly imagine this dominion gives them such a superiority over women, as renders the whole sex despicable, in comparison with themselves. Such ignorant men will not suffer their wives to reason with them, because they are women; and crown their despotic triumphs by asking, "How should a woman know any thing?" This procedure is so absurd, so ridiculous, that where it is to be found, the husband may properly be said to want common sense. Some studia and tyrannical husbands pretend to a miscrable kind of low wit; and, for want of invention, can never bring forth a jest but at the expense of their wives. All the state invectives against the sex are trumped up by these heroes to abuse their wives with. And as such doughty champions, without antagonists, must always appear victorious, women are thus abused to their faces: while, for very sensible and decent reasons, they either droad or refuse to defend themselves; which so plume these triumphant gentlemen, that at length they turn their stupid jest into earnest, and thence really acquire a shameful and natural contempt of women. We would, however, remind them, in the words of Bishop Horne, that "men themselves, who have all the authority in

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